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A NEW SPECIES OF *POGONOPHRYNE* (PISCES: ARTEDIDRACONIDAE) FROM THE SOUTH SHETLAND ISLANDS, ANTARCTICA

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Abstract.—*Pogonophryne dewitti* is described from a 55.0 mm SL juvenile specimen collected from between 800 and 900 m in the Bransfield Strait, South Shetland Islands, Antarctica. This species belongs to the unspotted group of the genus, but is from shallower water. It is distinguished from other members of the unspotted group in having a long mental barbel (22% SL), the terminal expansion with short, rounded, unbranched processes; 18 gill rakers on the first gill arch; and about 19 tubular scales in the upper lateral line. A key to the unspotted group of *Pogonophryne* is provided.

Among the unidentified specimens of *Pogonophryne* collected by the USNS *Eltanin* from 1963–1968, two juveniles were distinguished from all other known species of the genus by the absence of any dark markings (Eakin 1977). One of these (*P.* sp. 1b, Eakin 1977) was described as a new species, *P. albipinna,* a particularly deepwater form with white fins (Eakin 1981a). The other specimen (*P.* sp. 1a, Eakin 1977) differs significantly from *P. albipinna* and is described below as a new species, *P. dewitti.* Recent collecting has yielded additional undescribed species of *Pogonophryne*; descriptions of those and a complete key to the known species of the genus will appear in a forthcoming paper (Eakin, 1987). Presented here is a key to the unspotted group to which *P. dewitti* belongs.

Measurements and counts follow those of Eakin (1977) and Eakin & Kock (1984). Measurements are presented as percentages of standard length unless otherwise indicated.

LACM refers to the Los Angeles County Museum of Natural History, Los Angeles, California. USC-*Eltanin* refers to the University of Southern California Antarctic Biological Research Program conducted aboard the USNS *Eltanin.*

Pogonophryne dewitti, new species
Figs. 1–2

Holotype.—LACM 10485-3; juvenile, 55.0 mm SL; USC-*Eltanin* sta 432, Bransfield Strait, South Shetland Islands, Antarctica (from 62°52′S, 59°27′W to 62°55′S, 59°15′W), 884–915 m; 5-foot Blake trawl; 7 Jan 1963.

Diagnosis.—This species of *Pogonophryne* is unspotted and has a long mental barbel, the terminal expansion of which is covered with short, rounded, unbranched processes.

Description.—Body stout anteriorly, tapering to caudal peduncle. Length of head 36.4; posttemporal ridges not pronounced, depth of head at this level 17.3; width of head at preoperculars 21.8. Depth of body at origin of second dorsal fin 17.3; depth of body at origin of anal fin 12.2; width of body at origin of anal fin 6.7; depth of caudal peduncle 6.9.

Snout (curve of jaws) in dorsal view slightly flattened at midline; internostril distance 8.4; length of snout 9.0; diameter of orbit 8.4; snout to orbit ratio 1.09. Interorbital region rather wide, fleshy measurement 10.0; bony measurement 6.0. Opercular-subopercular distance 14.5; snout to

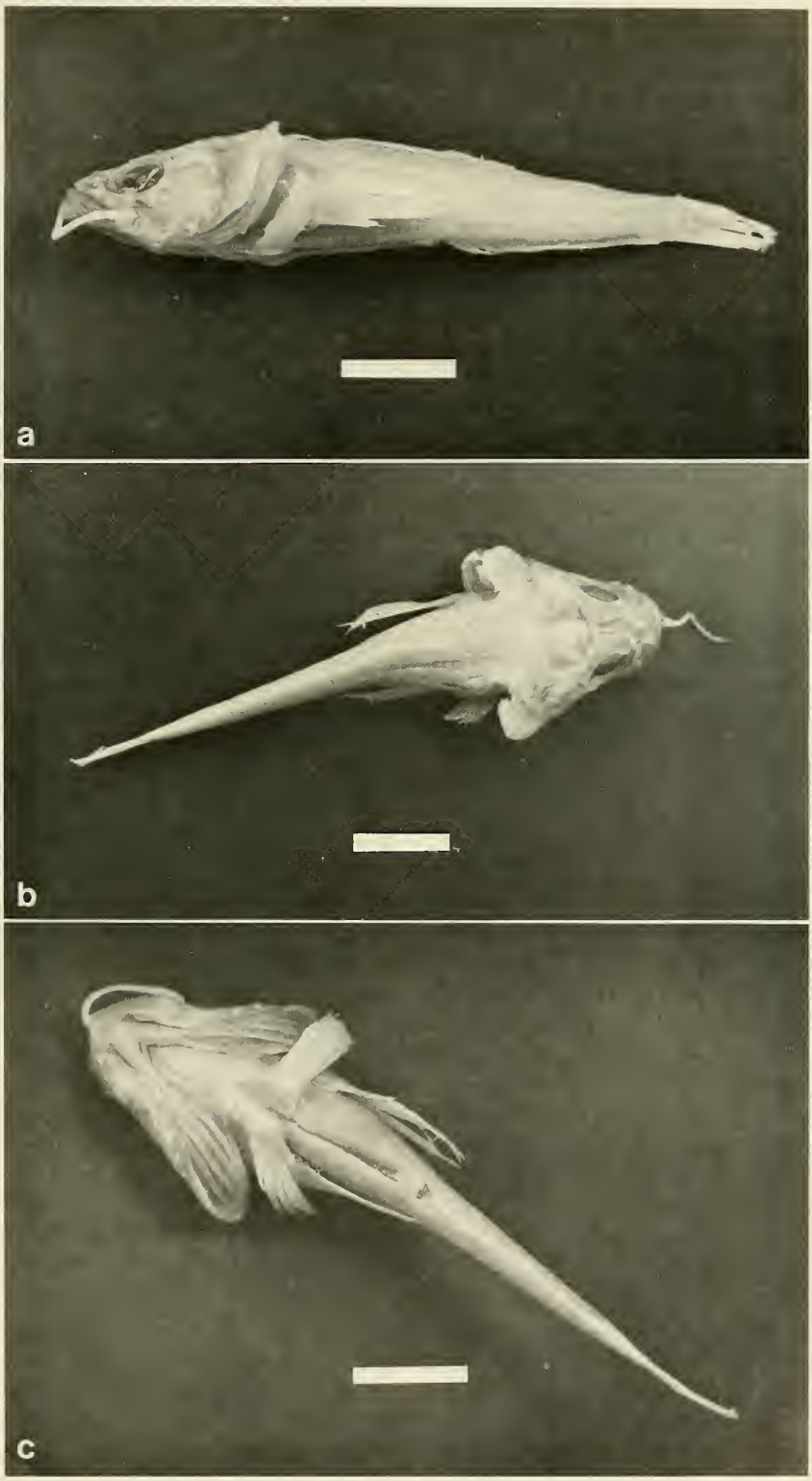

Fig. 1. *Pogonophryne dewitti*, holotype, LACM 10485-3; juvenile, 55.0 mm; a, lateral view; b, dorsal view; c, ventral view; scale = 1 cm.

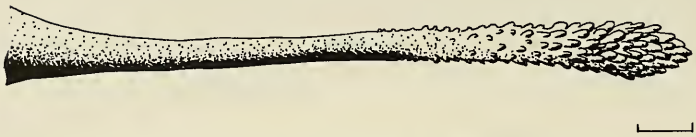

Fig. 2. Mental barbel of *Pogonophryne dewitti*, holotype; dorsal view; scale 1 mm.

opercular-subopercular ratio 0.625. Postorbital length of head 19.6. Width of jaws 18.2. Length of upper jaw 14.5; lower jaw projecting beyond upper a distance 3.0 of head length. Tooth patterns: (indistinct due to small size of specimen) upper jaw with 2 to 3 broadly curved, irregular rows of teeth (2 rows posteriorly, 2 to 3 rows near symphysis); lower jaw with 1 to 2 irregular rows of teeth in V-shaped pattern. Mental barbel very long, 22.7; terminal expansion comprising about 40% of barbel length, less than twice as wide as stalk, and covered with short, rounded, unbranched processes (Fig. 2). Anterior gill rakers on first arch 2 + 0 + 8 = 10; posterior gill rakers 1 + 0 + 7 = 8; total 18.

First antedorsal distance 34.5; second antedorsal distance 40.2; anteanal distance 61.8. Length of second dorsal-fin base 52.7; length of anal-fin base 34.0; length of caudal fin 20.0; length of pectoral fin 26.7; width of pectoral-fin base 7.3; length of pelvic fin 21.8. Interdorsal distance 5.5. First dorsal fin with two spines of equal length, 9.1. Second dorsal fin with 27 rays; length of longest (fifth) ray 12.5. Ratio of longest first dorsal-fin spine to longest second dorsal-fin ray 0.725. Anal-fin rays 17. Pectoral-fin rays 19 (left) and 20 (right). Upper lateral line with 19 pores (tubular scales) on both sides, ending under about seventeenth (left) and fifteenth (right) rays of second dorsal fin. Middle lateral line with about 17 (left) and 19 (right) disc-shaped scales; no tubular scales visible, but several posterior scales appear to be partially closed tubes. Cephalic lateral-line pores typical for *Pogonophryne*: preoperculo-mandibular canal with 9 pores; infraorbital canal with 7 pores; supraorbital canals with 2 nasal pores, 2 interorbital pores, and 1 unpaired coronal pore; temporal canal with 6 pores; and supratemporal canal incomplete across occiput (one pore on each side). Vertebrae 15 + 22 = 37.

Color.—Head, body, and fins, in alcohol, uniform yellowish brown with no dark markings (under magnification, very small brown pigment spots covering most of head and body visible).

Etymology.—I take pleasure in naming this species for Hugh H. DeWitt who not only provided the specimen but who has for many years contributed immeasurably to our knowledge of Antarctic fishes. He has inspired and guided me in my ichthyological research since my graduate study in his laboratory at the University of Maine.

Remarks.—This species, without dark markings and having relatively high numbers of vertebrae (37) and second dorsal-fin rays (27), belongs to the unspotted group together with *P. albipinna* (Eakin, 1981a) and *P. immaculata* (Eakin, 1981b). It differs from these species, however, in having been collected at a relatively shallow depth (less than 1000 m vs. about 1500 m for *P. albipinna* and 2500 m for *P. immaculata*). It is represented only by the juvenile holotype collected in the South Shetland Islands.

Key to the Unspotted Species of *Pogonophryne* Regan

1. Head and body with dark markings ..... spotted groups
– Head and body without dark markings 2
2. Fins light in color; first gill arch with total of 18–21 gill rakers; jaw width about 18% SL 3
– Fins dark basally, light distally; first

gill arch with total of 12 gill rakers; jaw width about 25% SL .... *P. immaculata* Eakin, 1981

3. Fins largely white; first gill arch with total of 21 gill rakers; upper lateral line with about 12 pores (tubular scales); mental barbel about 17% SL, terminal expansion about three times as wide as stalk; deepwater form (greater than 1500 m) .... *P. albipinna* Eakin, 1981

– Fins not white; first gill arch with total of 18 gill rakers; upper lateral line with about 19 pores (tubular scales); mental barbel about 22% SL, terminal expansion about twice as wide as stalk; not a deepwater form (less than 1000 m) ....*P. dewitti* n. sp.

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